

DRAFT - 01/20

AATCTTTATTTATCGATGTTAACAGCTTAGTAATCGATGCCACGTGAGGGGTGTCGACC  
CACCGTCCGGAGTAGGTTGAGCTGCCTGTTCTCCATTGTCAGCCAGTCTATTCCAG  
ATTGTTGAACCTCTGGCCGACAATACAGGAAGGAAGACTAAAGCAGCAAAGGGACCTA  
CAGCGTCTGCAGCATGGCTGGTTAAGTAGGATTGTCCTTCTGGGAGTATTACTTA  
CAGCAAGAGCAAACATCAGAATGGAGAACAAATGTGCCAAGGCTGAAATTATCCTACAAA  
GAAATGTTGGAATCCAACAATGTGATCACTTCAATGGCTGGCAACAGCTCCAGTTATCAT  
ACCTTCCTTGGATGAGGAACGGAGTAGGCTGTATGTTGGAGCAAAGGATCACATATTTC  
ATTGACCTGGTTAATATCAAGGATTTCAAAAGATTGTCGAGCTATCTTACACCAAGAAG  
AGATGAATGCAAGTGGCTGGAAAAGACATCCTGAAAGAATGTGCTAATTCAAGGTAC  
TTAAGGCATAATCAGACTCACTGTACGCCGTGGAACGGGGCTTCAATCCAATTGC  
ACCTACATTGAAATTGGACATCATCCTGAGGACAATATTTAAGCTGGAGAACTCACATT  
GAAAACGGCGTGGGAAGAGTCCATATGACCTAAGCTGCTGACAGCATCCCTTTAATAGA  
TGGAGAATTATACTCTGAACTGCAGCTGATTTATGGGGCAGACTTGCTATCTCCGAA  
CTCTGGGACCACCAACCCATCAGGACAGAGCAGCATGATTCCAGGTGGCTCAATGATCC  
AAAGTTCATTAGTGCCACCTCATCTCAGAGAGTGACAATCCTGAAGATGACAAGTATACTT  
TTCTCCGTAAAATGCAATAGATGGAGAACACTCTGAAAAGCTACTCACGCTAGAATAG  
GTCAGATATGCAAGAATGACTTGGAGGGCACAGAAGTCTGGTGAATAATGGACAACATT  
CTCAAAGCTCGTCTGATTGCTCAGTGCCAGGTCCAAATGGCATTGACACTCATTGATGA  
ACTGCAGGATGTATTCTTAATGAACCTTAAAGATCCTAAAAATCCAGTTGATATGGAGTGTT  
TACGACTCCAGTAACATTCAAGGGATCAGCGTGTATGTATAGCATGAGTGATGTGA  
GAAGGGTGTCTGGCCATATGCCAACAGGGATGGACCCAATCAATGGTGCCTTAT  
CAAGGAAGAGTCCCCTATCCACGGCCAGGAACCTGTCCCAGCAAAACATTGGTGGTTGA  
CTCTACAAAGGACCTCCTGATGATGTTAAACCTTGAAGAAGTCATCCAGCCATGTACAA  
TCCAGTGTCTCTATGAACAATGCCCAATAGTGTACAAACGGATGTAATTATCAATTAC  
ACAAATTGTCGTAGACCGAGTGGATGCAAGAGATGGACAGTATGATGTTATGTTATCGAA  
CAGATGTTGGACCGTTAAAGTAGTTCAATTCTAAGGAGACTTGGTATGATTAGAAG  
AGGTTCTGCTGGAAGAAATGACAGTTTGGAAACCGACTGCTATTCAAGGAGCT  
TCCACTAAGCAGCAACAATATATTGTTCAACGGCTGGGTTGCCAGCTCCCTTACA  
CCGGTGTGATTTACGGAAAGCGTGTGCTGAGTGTGCTGCCAGCACAAGACGACA  
GCTTGGATGGTCTGCATGTTCTCGCTATTCTTCCACTGCAAAGAGACGCAAGACGACA  
AGATATAAGAAATGGAGACCCACTGACTCACTGTTCAAGTACACCATGATAATCACCAG  
GCCACAGCCCTGAAGAGAGAATCATCTATGGTAGAGAATAGTAGCACATTGGAAATGC  
AGTCCGAAGTCGCAGAGAGCGCTGGTCTATTGGCAATTCCAGAGGCGAAATGAAGAGCGAA  
AAGAAGAGATCAGAGTGGATGATCATATCATCAGGACAGATCAAGGCCTCTGCTACGTAGT

FIG. 1A

CTACAACAGAAGGATTCAAGGCAATTACCTCTGCCATCGGGTGGAACATGGGTTCATACAAAC  
TCTTCTTAAGGTAACCCTGGAAGTCATTGACACAGAGCATTGGAAAGAACTTCTTCATAAAGA  
TGATGATGGAGATGGCTCTAAGACCAAAGAAATGTCCAATAGCATGACACCTAGCCAGAAGG  
TCTGGTACAGAGACTTCATGCAGCTCATCAACCACCCCAATCTAACACGATGGATGAGTTC  
TGTGAACAAGTTGGAAAAGGGACCGAAAACAACGTCGGCAAAGGCCAGGACATACCCAG  
GGAACAGTAACAAATGGAAGCACTTACAAGAAAATAAGAAAGGTAGAAACAGGAGGACCCA  
CGAATTGAGAGGGACCCAGGAGTGTCTGAGCTGCATTACCTCTAGAAACCTCAAACAAGT  
AGAAACTTGCTAGACAATACTGGAAAAACAAATGCAATATACTGAACCTTTTCATGGCA  
TTATGTGGATGTTACAATGGTGGAAATTAGCTGAGTCCACCAATTATAAATTAAATCCA  
TGAGTAACCTTCCTAATAGGCTTTTCTAATACC (SEQ ID NO:1)

GAATTCTCGAGCTCGTCACCACGCCCTCCTGTGCAAGAACTCTGAGCCCCAGGTGCAGG  
AGGCTGAGGCCTGCAGAGAGACTTGCAGAGAGACCCAGCAAGCCATGGTGTTCATGGA  
GATGTGAGGGTACTTACTGGGCTCGAGGAACATCCTGAAGCTGTGGCTGGACACTGCT  
CTGTTGTGACTTCCTGATAACCATGGAACACTACTGTTGGACTTACCAATTCTGAAAAGCC  
CATGAACCTGGAAAATGCTAGAAAGTTCTGCAAGCAAAATTACACAGATTAGTCGCCATAC  
AAAACAAGAGAGAAATTGAGTATTAGAGAATACATTGCCAAAAGCCCTTATTACTACTGGA  
TAGGAATCAGGAAAATGGAAAATGTGGACATGGTGGAACCAACAAACTCTCACTAAA  
GAAGCAGAGAACTGGGTGCTGGGAGCCAACAACAAGAAGTCCAAGGAGGACTGTGTG  
GAGATCTATATCAAGAGGGACGAGACTCTGGAAATGGAACGATGACGCCTGTCACAAAC  
GAAAGGCAGCTCTGCTACACAGCCTTGGCAGGCCAGGGTCTGCAATGGCGTGGAGA  
ATGTGTGGAAACTATCAACAATCACACGTGCATCTGTGATGCAGGGTATTACGGGCCCCAGT  
GTCAGTATGTGGTCCAGTGTGAGCCTTGGAGGCCCCCTGAGTTGGTACCATGGACTGCAT  
CCACCCCTGGAAACTTCAGCTTCCAGTCCAAGTGTGCTTCAACTGTTCTGAGGGAAAGAG  
AGCTACTTGGGACTGCAGAAACACAGTGTGGAGCATCTGGAAACTGGTCATCTCCAGAGCC  
AATCTGCCAAGTGGTCCAGTGTGAGCCTTGGAGGCCCCCTGAGTTGGTACCATGGACTGC  
ATCCACCCCTGGAAACTTCAGCTTCCAGTCCAAGTGTGCTTCAACTGTTCTGAGGGAAAG  
AGAGCTACTTGGGACTGCAGAAACACAGTGTGGAGCATCTGGAAACTGGTCATCTCCAGAG  
CCAATCTGCCAAGAGACAAACAGAAGTTCTCAAAGATCAAAGAAGGTGACTACAACCCCT  
CTTCATTCTGTAGCCGTATGGTCACCGCATTCTGGGGCTGGCATTCTCATTTGGCTGG  
CAAGGCGGTTAAAAAAAGGCAAGAAATCTCAAGAAAGGATGGATGATCCATACTGATTATC  
CTTGAAAGGAAAGGCCATGAAGTGCTAAAGACAAACATTGGAAAATACGTCAAGTCCT  
CCCGTGAAGATTTACACGCAGGCATCTCCCACATTAGAGATGCAGTGTTGCTCAACGAAT  
CTGGAAGGATTCTTCATGACCAACAGCTCCTCCTAATTCCCTCGCTCATTCACTCCATT  
ACCCATCCCATAATGTGTCTATACAGAGTAGTATTTATCATCTTCTGTGGAGGAACA  
AGCAAAAGTTTACTGTAGAATATAAGACAGCTGCTTTACTCTTCTTAACCTTGTGTTCT  
AGTTCAATTCAAGCACAGAAGCTAATGCCAAACACAGTGAATATGATCCATGAGTAATTGGA  
AACTCAGACTCCTGCGCATAGTACGTACCCATTGTAACATCGACAAAAATCTTCATTCCA  
CCTCCAAAGAACAGTGCTCTTCAAGTTGGAAAGTCCTACTCCTCTGTAGACCCACTAT  
CTGTGAGTGACAGCCACTGTAGCTGTTCACATTACCTCCCCATCTCCTTCTAGGAGA  
ATAATTCCACACACTGCACCCATGATGCCACAAACATCAAAGAAGGGAAAATCTCCTGC  
ATTGAGTTTAGTTGAGTTCCCTCTTTATTAGATCTGATGGTCCTGAAGTCAG  
TGTTCTGATGATTATTAATAGTTAATGATAACACAACCAACTCTCTGGAGCTGATGTTATGAA

GACAACAGGTAGAAAAATTCTGGGCTCAGGCTGGAGTGACACCCTTCTTCCCTAACAT  
CTTCTACTCAGATAACCTAAATTAGATTCAAGGACAGCTGTCCCCAACTCTTACCATGTCTT

TATAACTTGCTCCTTAACCTGCCAACCTGAGGCTATCTCATTTCCTCGCTTCACTCTGCAA  
GGTTTATAACATGATGAATTAAATAC (SEQ ID NO:2)

FIG. 2B

GTGACCCACCGTCCGCAGACCTAGTAGCTGTGGAAACCATGGCCCTGAGTGTATGTGT  
CTGGGCCTTGCCTGCTGGGCTCCTGCAGAGCCAGGCCAGGACTCAACTCAGAACTTGA  
TCCCTGCCCCATCTCTGCTCACTGTCCCCCTGCAGCCAGACTCCGGAGCGATCAGTTCCG  
GGCAGGTGGTACGTTGTGGCCTGGCAGGCAATGCGGTCCAGAAAAAAACAGAAGGCAG  
CTTACGATGTACAGCACCATCTATGAGCTACAAGAGAACAAATAGCTACAATGTCACCTCCAT  
CCTGGTCAGGGACCAGGACCAGGGCTGCGCTACTGGATCAGAACATTGTTCCAAGCTCC  
AGGGCTGCCAGTTCACTCTGGAAATATGCACAGGTATCCTCAGGTACAGAGCTACAATG  
TGCAAGTGGCCACCACGGACTACAACCAGTTGCCATGGTATTTTCCGAAAGACTTCTGAA  
AACAAAGCAATACTCAAAATTACCCGTATGGAAGAACCAAGGAGCTGCCCCCTGAACTGAA  
GGAACGTTACCCGCTTGCCAAAGTCTCTGGCCTCAAGGACGACAACATCATTTCTG  
TCTGTCTGCCACTCCATCTTCTGTTGCCAGAGAGCCACCTGGCTGCCACCAGCCACC  
ATACCAAGGAGCATCTGGAGCCTCTTCTTATTTGCCAGCACTCCCCATCCACCTGTCTAA  
CACCACCAATGGCGTCCCCCTTGCTGAATAATACATGCCCAAAAAAAAAAAAAGG  
GCGGCCGC (SEQ ID NO:3)

MALSVMCLGLALLGVLQSQAQDSTQNLIPAPSLLTVPLQPFRSDQFRGRWYVVLAGNAVQK  
KTEGSFTMYSTIYELQENNSYNVTSILVRDQDQGCRYWIRTFVPSSRAGQFTLGNMHRYPQVQS  
YNVQVATTDYNQFAMVFFRKTSNKQYFKITLYGRTKELSPERKERFTRFAKSLGLKDDNIIF SVC  
LPLHLSCCQRATWLPHQPPYQGASGASSYLASTPHPPVLTTPPMASPFC (SEQ ID NO:4)

TCGCTGGTAACTTGATGACATCAGCTGTAAGATCATAGAACCTTCCCTCAGAATAAG

CCCCTTTGGTTTGTCTATCGACCCTAACAGCTAGTAATCGATGCCACTCGAGGCCAA  
GAATTCAATTACGAGCCTGAGCTCCTCGGCTTTCCCCCTTTGCATCTGTTCCGGAA  
TACCTGCAACTCAAGGATGGATGCCCTGAGACTGGCAAATTCAAGCTTGTGACTTGT  
TCAAACAACATGTGAAAGGGACCCAGCAGGAAACATTCTCTCCAATATGCCTCTCA  
CTTCTCTGTCCCTGCGCAAGTGGCACCAAAGGCACACAGCAAATGAAATTGGACAGGT  
CCTTCATTTGAGAATGTCAAAGATGTACCCCTTGGTTCAAACAGTCACCTGTGATGTTAA  
TAAGCTCAGTTCTTTACTCTTGAAACTTGTCAAGCGACTCTACATAGACAAATCTGAAC  
CCTTCTACAGAATTATCAGTTCTACCAAAAGACCATATGCAAAAGAATTGGAAACTGTTGAC  
TTCAAAGACAAACTGGAAGAACGAAAGGTCAAATTAAACAGCTCCATTAAGGAGCTCACAGA  
TGGCCACTTGAGGACATTTGTCAGAGAACAGTATAAGTGACCAGACCAAAATCCTGTGG  
TTAATGCTGCCTACTTGTGAAAGTGGATGAAGAAATTCCGAATCAGAAACAAAAGAAT  
GTCCTTCAGAATCAGCAAGACAGACACCAAACCCGTACAATGATGAATCTGAGGCCACT  
TTCTGCTGGTAACATTGATGACATCAGCTGTAAGATCATAGAACCTTCCCTCAGAATAAG  
CATCTGAGTATGCTCATTGTGCTCCCCAAGGACGTGGAGGATGAGTCCACAGGCCCTGGAGA  
AGATTGAACAGCAACTCAACCCAGAAACATTGTTACAGTGGACCAACCCAGTACCATGGCC  
AATGCCAAAGTCAAACTTCCCTCCAAAGTTAAGGTAGAAAAGATGATTGATCCCAGGCT  
AGTCTGGAAAGCCTAGGGCTGAAAGTCTCTCAATGAAAGTACATCGGATTCTCTGGAAAT  
GTCAGAGACCAAGGGAGTGTCCCTGTCATGTGATTGATAGAGTATGCCTAGAAATAACCG  
AAGATGGTGGTGAGTCCATCGAGGTGCCAGGGTCCGGATCTACAGCACAAGGATGAATT  
CAATGCTGACCATCCATTATATCATTAGACACAACAAACTCGAAACATCATTCTTT  
GGCAAATTCTGTTCTCCTTAGCTGGCAGGGCCTGCCAAGTCTCAGGAACTTGTCTGTAGT  
CGCAGAGCTGTAAACTTGTATCCAGACAATCACTTCTATACAATAATTGAAATGTTG  
CTGAAAAA (SEQ ID NO:5)

FIG. 4

TOP SECRET//  
REF ID: A65860

GGTGGAGACTAAATATAATCTTTATTTATCGATGTTAACAGCTTAGTAATCGATGCCACG  
TCGAGGGGTGTCGACCCACGCGTCTGCCTGCCTGTTCCACGCATTTCCAGGATA  
ACTGTGACTCCAGGCCGCAATGGATGCCCTGCAACTAGCAAATTGGCTTGCCTGAT  
CTGTTCAAACAACATGTGAAAAGGAGCCACTGGCAATGTCCTCTCTCCAATCTGTCT  
CTCCACCTCTGTCACTGCTCAAGTGGTGCTAAAGGTGACACTGCAAATGAAATTGGAC  
AGGTTCTTCAATTGAAAATGTCAAAGATGTACCCGGATTCAAACAGTAACATCGGATG  
TAAACAAACTTAGTCCTTTACTCACTGAAACTAATCAAGCGGCTCTACGTAGACAAATCTC  
TGAATCTTCTACAGAGTTCATCAGCTCTACGAAGAGACCCTATGCAAAGGAATTGGAAACT  
GTTGACTTCAAAGATAAATTGGAAGAACGAAAGGTGAGATCAACAACACTCAATTAGGATCTC  
ACAGATGCCACTTGAGAACATTAGCTGACAACAGTGTGAACGACCAGACCAAAATCCT  
TGTGGTTAATGCTGCCTACTTGGCAAGTGGATGAAGAAATTCTGAATCAGAAACAAA  
AGAATGTCCTTCAGAGTCACAAAGACAGACACCAAAACAGTGCAGATGATGAACATGGAGG  
CCACGTTCTGTATGGAAACATTGACAGTATCAATTGTAAGATCATAGAGCTCCTTCAA  
ATAAGCATCTCAGCATGTTCATCCTACTACCCAAGGATGTGGAGGATGAGTCCACAGGCTTG  
GAGAAGATTGAAAAACAACTCAACTCAGAGTCACTGTCACAGTGGACTAATCCCAGCACCAT  
GGCCAATGCCAAGGTCAAACCTCCATTCAAATTAAAGGTGGAAAGATGATTGATCCCA  
AGGCTTGTGGAAAATCTAGGGCTGAAACATATCTCAGCGAAGACACATCTGATTTCT  
GGAATGTCAGAGACCAAGGGAGTGGCCCTATCAAATGTTATCCACAAAGTGTGCTTAGAAAT  
AACTGAAGATGGTGGGGATTCCATAGAGGTGCCAGGAGCACGGATCCTGCAGCACAGGAT  
GAATTGAATGCTGACCATCCCTTATTACATCATCAGGCACAACAAACTCGAAACATCATT  
TTCTTGGCAAATTCTGTTCTCTTAAGTGGCATAGCCCATGTTAAGTCCCTGACTTT  
TGTGGATGCCGATTCTGAAACTCTGCATCCAGAGATTCTAGATAACAATAATTGC  
TAATGTTGCTGGATCAGGAAGCCGCCAGTACTTGTCAATATGTAGCCTTCACACAGATAGACC  
TTTTTTTTTTCCAAATTCTATCTTTGTTCTTTCCCATAAGACAATGACATACGCTTT  
AATGAAAAGGAATCACGTTAGAGGAAAATATTATTCAATTGTCATGTCAGCTGGGGTA  
GTTGGCAGAAATACAGTCTCCACAAAGAAAATCCCTATAAGGAAGATTGGAAGCTCTTCT  
CCCAGCACTATGCTTCTTGGATAGAGAATGTTCCAGACATTCTCGCTCCCTGAAA  
GACTGAAGAAAGTGTAGTGCATGGACCCACGAAACTGCCCTGGCTCCAGTGAACACTGGG  
CACATGCTCAGGCTACTATAGGTCCAGAAGTCCTATGTTAAGCCCTGGCAGGCAGGTGTT  
ATTAAAATTCTGAATTGGGGATTTCAAAAGATAATTTACATACACTGTATGTTAGAA  
CTTCATGGATCAGATCTGGGGCAGCACCCTATAAACACCCTTAATATGCTGCAACAAA  
TGTAGAAATTCAAGACAAATGGATACATAAAGACTAAGTAGCCCATAAGGGGTCAAATTG  
CTGCCAAATGCGTATGCCACCAACTACAAAACACTCGTCAGAGCTTCAAGATTG

FIG. 5A

GGAATGTTGGATAAGGAATTATAGACCTCTAGTAGCTGAAATGCAAGACCCCAAGAGGAAGT  
TCAGATCTTAA (SEQ ID NO:6)

FIG. 58

Figure 6

	Semaphorin D	Maspin	B94	mel-14 Antigen	24p3	Proliferin
Expression in EMT6 tumors	Up-regulated in CDDP resistant tumor	Down-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor
Expression in EMT6 cell lines	Remain up-regulated in CDDP resistant cell line to passage 13 (passage 3, 6, 10, and 13 checked)	Remain down-regulated in CDDP resistant cell line to passage 3	Remain up-regulated in CDDP cell line to passage 10	Remain up-regulated in CDDP cell line to passage 10	Remain up-regulated in CDDP cell line to passage 10	Remain up-regulated in CDDP cell line to passage 10
Expression in multi-cell line pairs	(A2780, UCL4, U937, HL60, SCC25 pairs)	Highly expressed in SCC25 CDDP cell line, not significantly expressed in other cell line pairs.	Highly expressed in SCC25 wild type cell line (and HL60 AD cell line), not significantly expressed in other cell line pairs.	Differentially expressed in HL60 and U937 cell lines (high in HL60 and HL60Rev, low in HL60AD).	Slightly differentially expressed in SCC25 CDDP cell lines; not significantly differentially expressed in other cell line pairs.	Slightly up-regulated in A2780AD and SCC25 CDDP cell lines; Not significantly differentially expressed in other cell line pairs.